

Description of Drawing 1

Drawing 1 is a block flow diagram of the basic RWMS system. In particular, and by numbering, the following are brief descriptions of numbered items on the drawing:

- (1) RWMS Electronic Programmable Controller Unit, represented by all inside the dotted square.
- (2) Represents a water meter for those on public water supply, and represents a well head for well users.
- (3) Main Shut Off Electrically Actuated Solenoid Valve. Valve must of type which remains in last state (meaning on or off), requiring separate signals from the controller to change states.
- (4) Wiring for communications of electrical signals between Controller and Main Solenoid Valve.
- (5) Pressure Sensor
- (6) Wiring for communications of electrical signals between Controller and Pressure Sensor.
- (7) Flow Counting Device. (Note: the flow counting device can be installed elsewhere)
- (8) Wiring for communications of electrical signals between Controller and Flow Counting Device.
- (9) An additional solenoid valve, optionally installed only when the RWMS functional Mode called "Locate Mode" is desired by the owner/user. This valve is placed at the point in which we have previously in this application described as "Point of Entry (POE)". Many properties will have a manual valve at this point already, and that manual valve will work for the locate test, but will require the user to manually place the valve in the "Off" position prior to running the Locate Leak Test.
- (10) Wiring for communications of electrical signals between Controller and (POE) Solenoid valve.
- (11) An additional pressure sensor, optionally installed only when the RWMS functional Mode called "Locate Mode" is desired by the owner/user. This sensor is a must install item for "Locate Mode" to operate regardless of whether the POE valve is a manual or solenoid actuated valve.
- (12) Wiring for communications of electrical signals between Controller and additional Locate Pressure Sensor.
- (13) Drain Solenoid Valve. Only installed when the user wishes to enable "Purge Mode". This is a Normally Off Electrically Actuated Solenoid Valve.
- (14) Wiring for communications of electrical signals between Controller and Drain Solenoid valve.
- (15) Vacuum Release Solenoid Valve. Only installed when the user wishes to enable "Purge Mode". This is a Normally Off Electrically Actuated Solenoid Valve.
- (16) Wiring for communications of electrical signals between Controller and Vacuum Release Solenoid Valve.
- (17) Home Water Heater. Current Design has perfected control of Electric Water Heaters, and continuous design efforts are targeted at perfection of control of Gas Water Heaters.
- (18) Electrically Actuated AC Power Relay Switch for control of energy source to water heater.
- (19) Wiring for communications of electrical signals between Controller and Relay Switch for water heater.
- (20) Wiring for communications of electrical signals between Controller and a Thermal Sensing Pad which monitors current water temperature in a water heater. This item has been specifically developed for the RWMS with methods of adaption to all current types of thermostats for Electrical Water Heaters.
- (21) Absolutely represents the AC current normal at homes and small businesses, and may additionally represent gas energy source for water heating.
- (22) Device for the conversion of AC Electrical Current to DC Electrical Current. Power Supply, whether external or internal to the Controller Assembly.
- (23) Plug or connect for Power Supply to receive AC electrical source. Also internal or external.
- (24) Wire for delivery of output DC Current from Power Supply to Controller Assembly.
- (25) Water Softening and or Filtering Device and its associated wiring to Controller.

The labeling which reads Highest and Lowest Structure Plumbing represent actual elevation plumbing from ground level. All other markings seem self explanatory.